IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

In re application of: Katukam et al.

Attorney Docket No.: CISCP694

Application No.: Unknown

Examiner: Unknown

Filed: Herewith

Group: Unknown

Title: METHOD AND APPARATUS FOR COMPUTING A PATH IN A SYSTEM WITH NODAL AND LINK DIVERSE CONSTRAINTS

CERTIFICATE OF EXPRESSMAILING
I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post Office To Addressee" Service under 37 CFR § 1.10 Mail to: Assistant Commissioner for Patents, Washington, DC 20231 on July 18, 2001.

Signed: Jacquie M. Vo
Jacquie M. Vo

10817069.071801

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to subsequent examination of the above-referenced U.S. Patent Application, please enter the following amendments and remarks.

IN THE SPECIFICATION:

Please replace the paragraph beginning on page 3 at line 22 with the following:

Fig. 2a is a diagrammatic representation of a TDM network which includes nodes and links. Within a TDM network 204, if a signal is to be transmitted between a source node B 208b and a destination node E 208e, a customer may specify to a network administrator whether he prefers a protected path or an unprotected path. If a protected path is requested, then protected links 212 may be used to for a protected path. Alternatively, if a customer wants a protected circuit that uses

unprotected links, than a virtual UPSR in a PPMN, *e.g.*, a primary path and an alternate path that form a ring-like UPSR at a circuit level, may be used. If the cost of transferring information across protected links 212 is more than that of transferring information across unprotected links 216, then a customer may decide whether to incur the additional cost associated with protected links 212, or to use unprotected links 216.

Please replace the paragraph beginning on page 4 at line 4 with the following:

Typically, when a protected path is desired between source node B 208b and destination node E 208e, if protected links are available, the protected links are selected for inclusion in a path. However, when protected links such as links 212 are unavailable for use, *e.g.*, when there is no available bandwidth on links 212, a least switched unprotected path between source node B 208b and destination node E 208e which has a corresponding alternate path is desired. In other words, a path which uses the fewest number of nodes 208, which function as switches, to reach destination node E 208e and has a corresponding alternate path is preferred when protected links 212 are unavailable. Such a path is generally considered to be the shortest available path between node B 208b and node E 208e. Hence, although an unprotected path from source node B 208b to destination node E 208e is also available using unprotected links 220, as well as through unprotected links 224, the use of unprotected links 216 is preferred. It should be understood, however, that if enough bandwidth is not available in the path through links 216, paths through either links 220 or links 224 may be used instead.

<u>REMARKS</u>

The Specification has been amended to correct minor typographical errors.

In view of the above, the Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the

undersigned can be reached at the telephone number set out below.

If any fees are due in connection with the filing of this amendment, the Commissioner is authorized to charge such fees to Deposit Account 50-1652 (Order No. CISCP694).

Respectfully submitted,
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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The paragraph beginning on line 22 of page 3 was replaced with the following:

Fig. 2a is a diagrammatic representation of a TDM network which includes nodes and links. Within a TDM network 204, if a signal is to be transmitted between a source node B 208b and a destination node E [208] 208e, a customer may specify to a network administrator whether he prefers a protected path or an unprotected path. If a protected path is requested, then protected links 212 may be used to for a protected path. Alternatively, if a customer wants a protected circuit that uses unprotected links, than a virtual UPSR in a PPMN, *e.g.*, a primary path and an alternate path that form a ring-like UPSR at a circuit level, may be used. If the cost of transferring information across protected links 212 is more than that of transferring information across unprotected links 216, then a customer may decide whether to incur the additional cost associated with protected links 212, or to use unprotected links 216.

The paragraph beginning on line 4 of page 4 was replaced with the following:

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